



Employee sustainable behaviors and their relationship with Corporate Sustainability: A Delphi study

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ABSTRACT

Corporate Sustainability is today a key issue for companies considering value generation, climate change and social requirements. This sustainability must be achieved in the economic, social, and environmental aspects; many authors have studied the variables that make up these aspects. Despite the importance of employees in Corporate Sustainability, to our knowledge, no studies have connected the variables with the impact that employees have on them. Therefore, in this study, combining a literature review with a Panel Delphi with 11 experts, we seek consensus on: 1) the relevance of the different variables that define Corporate Sustainability; 2) on which variables can employees have an impact; and 3) what employee behaviors are more susceptible of having this impact. The results show consensus on employees and propose behaviors that could enhance some of the most important variables of economic, social and environmental sustainability. This result opens up the possibility of developing a scale to measure employee sustainable behaviors and to understand how companies can facilitate these behaviors.

1. Introduction

In recent years, research has generated a vast literature on Corporate Sustainability. Several justifications have been given, such as the fact that industries are one of the causes of climate change (Jiang et al., 2018), the generation of social and environmental value as a competitive advantage (López et al., 2007), economic benefits like better access to loans (Azapagic, 2003) or public scrutiny of all company outcomes (Kolk et al., 2008). Whether it is to improve the company's results or to avoid the risks present in today's business (Geissdoerfer et al., 2017), it seems that Corporate Sustainability is one of the crucial aspects of business today (Tseng, 2017).

There is no common definition of Corporate Sustainability, but it is usually defined by a positive performance in the economic, social, and environmental areas without compromising the future performance (Meuer et al., 2020). This triple progress is what we understand as the sustainable development of the company (Feil et al., 2019). A key to understanding Corporate Sustainability is to study the variables in these three areas (Azapagic, 2003; Shi et al., 2017). We call variables of the Corporate Sustainability the areas or activities that can be measured through the indicators. However, several recent studies have shown that

there is a large dispersion in the choice of variables (Dočekalová and Kocmanová, 2016; Feil et al., 2019; Hutchins et al., 2019). These variables should take into account different aspects such as policies, leadership styles and attitudes, stakeholder engagement, and organizational culture, among others (Engert et al., 2016).

Some authors have stated that employees play an important role in Corporate Sustainability (Zhang et al., 2020) as they can enhance it through their behaviors (Ahuja et al., 2019). Previous literature has pointed out some sustainable behaviors (e.g. Čiarnienė et al., 2020) such as energy saving, material recycling, caring for other coworkers, or presenting suggestions to reduce the environmental impact of products. However, these studies have centered on specific employee behaviors and have not related them to the variables of Corporate Sustainability (Staniš kienė and Stankevi č i ū t ě , 2018; Tosti-Kharas et al., 2017; Wesselink et al., 2017). Thus, the identified behaviors do not make reference to all the aspects and variables of Corporate Sustainability.

Since there is no clear explanation of the role of employees in the development of Corporate Sustainability variables (e.g., Blok et al., 2015; Zhang et al., 2020), our aim is to study these variables and how they are affected by employee behaviors. Thus, we present three research questions:

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- RQ1. To what extent could we establish a complete and general list of variables with the relevance of each for Corporate Sustainability?
- RQ2. On what of these variables can employees have an impact?
- RQ3. How could employees have an impact on these variables?

To do this research, we will first make a state of the art on the variables from the literature review (section 2). Then, we will validate this list with experts and analyze which variables are the most important and which of them employees can impact. The method used is a Delphi survey (explained in section 3), the results of which are found in section 4. The study ends with some conclusions (section 5).

2. Variables of the Corporate Sustainability

Corporate Sustainability pursues the sustainable development of a company in the economic, social and environmental area (Feil et al., 2019). In order to clarify better the term, Elkington (1997) related Corporate Sustainability with the Triple Bottom Line, making reference that this sustainable development should encompass economic prosperity, environmental protection and social equity. For two decades, Corporate Sustainability has been considered to benefit companies economically through cost savings, greater accessibility to loans, better compliance with legislation, improved reputation and better position in the market, among other advantages (Azapagic, 2003). In the last years, it seems to be a social demand requiring that companies make a positive impact on the conditions and quality of life of the people living in the areas in which they operate (Henderson, 2020). In this vein, organizations should demonstrate their sensitivity and ability to generate social and environmental value, as well as economic value.

This social demand highlights the necessity of identifying a list of variables and indicators for measuring and improving the level of Corporate Sustainability. Some authors have proposed a list of variables for assessing Corporate Sustainability (Franco-García et al., 2018; Husgafvel et al., 2015; MSCI, 2015; SAM, 2020; Tokos et al., 2012). As a result, multiple and different lists of variables can be found in academic publications. A recent study that conducted a literature review on these Corporate Sustainability variables concluded that there is “high dispersion and low accuracy” in the choice of variables (Feil et al., 2019, p. 8).

Thus, to speak of a “general” set of variables is quite difficult for different reasons. There is the materiality, that is the specific environment for the industries and sectors of companies (Nikolaou et al., 2019). There is also a difference in the importance of variables due to regions (Feil et al., 2019), or the purchasing power of companies to allow changes in their inputs, or the economic conditions to make changes that may result in lower revenues over a period (SAM, 2020).

To collect and synthesize the main variables for the assessment of Corporate Sustainability, we carried out a semi-structured snowballing (Geissdoerfer et al., 2017) approach to collect the articles with different variables of Corporate Sustainability. First, we searched in the Scopus database for articles that included “Corporate Sustainability” and either “indicator” or “variable” as keywords, or as text in the title or in the abstract. We did not take into account if the authors distinguish between variables or indicators, since the latter are the particularizations of the variables (Azapagic, 2003). With this search, we located recent literature reviews on variables such as Nikolaou et al. (2019), Jiang et al. (2018), and Dočekalová and Kocmanová (2016), between other, which collected previous studies on Corporate Sustainability variables.

From those initial articles, we conducted a backwards snowball review. We searched the references of the selected articles looking for articles that provided different frameworks or literature traditions, or even developed their own set of variables (e.g. Bae and Smardon, 2011; Bansal, 2005; Husgafvel et al., 2015). With the new set of selected articles, we conducted a forward snowball review, which identify articles that cite at least one of the articles we have selected previously. In this process, we also located organizations dedicated to measuring Corporate

Sustainability, such as the GRI, the KLD and the Dow Jones Sustainability Index, and collected from them the definition of the variables (López et al., 2007; Meuer et al., 2020; Tokos et al., 2012). Our aim with this search was not to have a broad list of variables but to select those mentioned in different sectors and in different frameworks.

After this analysis of the existing literature and frameworks, Table 1 shows a list of economic variables, Table 2 identifies the selected variables for the social sustainability – divided by stakeholders as other authors do (Azapagic, 2003; Haanstra, 2016) – and Table 3 contains the main variables referring to the environmental sustainability. All these tables present the definitions and a selection of the literature that includes these variables.

Beyond the difficulty of compiling a precise, broad and accurate list of Corporate Sustainability variables (Feil et al., 2019); some studies have also asked how to implement sustainability strategies (Meuer et al., 2020). For example, the methodology proposed by Azapagic (2003) included an initial strategic phase which identified the variables, followed by a second planning phase which specified indicators and distributed responsibilities. Then came implementation and later communication to employees.

This view of implementation as the responsibility of a few managers is common among Corporate Sustainability studies. However, employees are important to sustainability as they can enhance Corporate Sustainability with their sustainable behaviors (Ahuja et al., 2019).

When investigating the impact that any employee can have on sustainability, the most common thing is to resort to personal initiative, beyond the company’s policies. One example is the study of Blok et al. (2015), which takes the studies of pro-environmental behaviors at home and brings them to the workplace. Other studies on sustainable behaviors seem to have limitations as they do not present the scale used to measure sustainable behavior (e.g. Čiarnienė et al., 2020) or have

Table 1
Corporate Economic Sustainability variables, definitions, and studies in which they appear.

Variables	Definition	References
Technology Generation	The organization’s patents, intellectual property, spin-offs, etc.	Feil et al. (2019)
Corporate Governance	Company management and administration	SAM (2020)
Codes of Conduct/ Corruption	The system of rules on how to behave and how to do business. Corruption is any action that is dishonest or represents a loss of trust	(MSCI, 2015; SAM, 2020; Tokos et al., 2012)
Risk and crisis management	The anticipation and evaluation of financial risks together with the identification of procedures to avoid or minimize their impact	(Husgafvel et al., 2015; SAM, 2020)
Direct economic performance	The income generated by the activity itself/Annual profits	(Bae and Smardon, 2011; Čiarnienė et al., 2020; Feil et al., 2019; Husgafvel et al., 2015; Jiang et al., 2018)
Employee wage	The salary that employees receive for their work in the organization	Tokos et al. (2012)
Innovation	Changes made to products, services and/or production systems for better performance	(Bansal, 2005; Jiang et al., 2018)
Reduction of input costs	The financial improvement from optimized purchasing and procurement	(Bansal, 2005; Čiarnienė et al., 2020; SAM, 2020; Singh et al., 2020)
Reduction of waste management costs	The financial improvement from optimized waste management and revenue from the sale of waste	(Bansal, 2005; Čiarnienė et al., 2020; SAM, 2020; Tokos et al., 2012)

Table 2
Corporate Social Sustainability variables, definitions, and studies in which they appear.

Stakeholder	Variables	Definition	References
Employees	Free Association	The right of workers and employers to establish and to join organizations of their choice without prior authorization, to promote and defend their respective interests, and to negotiate collectively with other parties	(Haanstra, 2016; Husgafvel et al., 2015; MSCI, 2015; SAM, 2020)
	Working Hours	The hours that comply with applicable laws and industry standards	(Haanstra, 2016; Husgafvel et al., 2015; Hutchins et al., 2019)
	Occupational Health and Safety	The promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations	(Bae and Smardon, 2011; Ćiarnienė et al., 2020; Feil et al., 2019; Jiang et al., 2018; MSCI, 2015; Nikolaou et al., 2019; Singh et al., 2020; Tokos et al., 2012)
	Human Capital Development	The training provided by the company aimed at developing the knowledge, skills, attitudes, and capabilities of employees	(Bae and Smardon, 2011; Feil et al., 2019; Hutchins et al., 2019; Jiang et al., 2018; Nikolaou et al., 2019; SAM, 2020)
	Equal Opportunities	The opportunities in education, employment, advancement, benefits and resource distribution freely available to all workers irrespective of their age, race, sex, or any other characteristic unrelated to ability, performance and qualification	(Bae and Smardon, 2011; Feil et al., 2019; Husgafvel et al., 2015; Hutchins et al., 2019; Jiang et al., 2018; MSCI, 2015; Nikolaou et al., 2019; SAM, 2020; Tokos et al., 2012)
	Fair Wage	A wage reasonably commensurate with the value of a particular service rendered	(Feil et al., 2019; Haanstra, 2016; Husgafvel et al., 2015; Hutchins et al., 2019; SAM, 2020)
	Employee Relations	The unity between employees and the feeling of connectedness within the company	(Azapagic, 2003; Feil et al., 2019; Hutchins et al., 2019; MSCI, 2015; Singh et al., 2020) (Jiang et al., 2018)
Local Community	Local Employment	The income and training opportunities for community members and local providers	(Haanstra, 2016; Husgafvel et al., 2015; Hutchins et al., 2019; Nikolaou et al., 2019)
	Access to Material Resources	The potential conflict over material resources and engagement with the local community on sustainable methods of sharing resources	(Haanstra, 2016; Hutchins et al., 2019; MSCI, 2015)
	Local Community Projects	The engagement through participation and/or sponsoring of community activities and projects	(Bansal, 2005; Feil et al., 2019; Husgafvel et al., 2015; Hutchins et al., 2019; MSCI, 2015; Nikolaou et al., 2019)
Client	Privacy	The protection of customer data confidentiality, limitation of the personal information collected, restriction of the use of data to its agreed purpose and the protection of data against external theft and/or misuse	(Haanstra, 2016; Husgafvel et al., 2015; MSCI, 2015)
	Health and Safety	The rights of clients to be protected against products and services that may be harmful to health	(Haanstra, 2016; Husgafvel et al., 2015; Hutchins et al., 2019; MSCI, 2015; Nikolaou et al., 2019)
Value Chain	Fair Relations with Suppliers	The potential impact or unintended consequences of procurement decisions on other organizations	(Haanstra, 2016; Husgafvel et al., 2015; Hutchins et al., 2019; MSCI, 2015; Singh et al., 2020)
	Intellectual Property Rights	The respect of the assignment of property rights through patents, copyrights and trademarks	Haanstra (2016)
Society/ Public	Legal Compliance	The adaptation of the company's activities to the legislation in force	(Husgafvel et al., 2015; Hutchins et al., 2019; MSCI, 2015)
	Social Innovations	The company's investments in social aspects	(Husgafvel et al., 2015; Hutchins et al., 2019)
	Communicated Environmental Risk	The communication of the company's environmental impacts and risks	(Bansal, 2005; Husgafvel et al., 2015; MSCI, 2015)

Table 3
Corporate Environmental Sustainability variables, definitions, and studies in which they appear.

Variables	Definition	References
Biodiversity	The protection of fragile ecosystems	(Azapagic, 2003; MSCI, 2015; Nikolaou et al., 2019)
Compliance with current environmental laws	The organization's compliance with environmental laws and/or regulations	(Bae and Smardon, 2011; Husgafvel et al., 2015; MSCI, 2015)
Emissions and effluents	The policies against pollution, contamination, and the emission of toxic and carcinogenic substances through gaseous and liquid materials	(Bae and Smardon, 2011; Feil et al., 2019; Husgafvel et al., 2015; Jiang et al., 2018; Nikolaou et al., 2019; SAM, 2020; Singh et al., 2020; Tokos et al., 2012)
Energy	The development of renewable power production and the reduction of the energy consumption	(Bae and Smardon, 2011; Čiarnienė et al., 2020; Feil et al., 2019; Jiang et al., 2018; Nikolaou et al., 2019; SAM, 2020; Singh et al., 2020; Tokos et al., 2012)
Environmental management system	The set of processes and practices that allow an organization to reduce its environmental impacts and increase its operational efficiency	(Bae and Smardon, 2011; Feil et al., 2019; MSCI, 2015)
Potential contribution to global warming	The management of company risks of higher input or production costs for their carbon-intense products due to increased energy costs	(Azapagic, 2003; Husgafvel et al., 2015; MSCI, 2015; SAM, 2020)
Toxic waste management	The responsibility in handling or storing toxic waste	(Bae and Smardon, 2011; Feil et al., 2019; MSCI, 2015; SAM, 2020; Singh et al., 2020; Tokos et al., 2012)
Materials	The optimization, recycling, reuse, and recovery of materials, products, and packaging	(Azapagic, 2003; Feil et al., 2019; Husgafvel et al., 2015; MSCI, 2015; Nikolaou et al., 2019; Tokos et al., 2012)
Environmental impact of products and/or services	The severity of controversies related to the environmental impact of a firm's products and services	(Bansal, 2005; MSCI, 2015)
Operations in environmentally sensitive locations	The elimination or reduction of operations in environmentally sensitive locations	Bansal (2005)
Transport	The change in a company's mobility needs towards the least environmentally damaging alternative	(Azapagic, 2003; Feil et al., 2019; Husgafvel et al., 2015)
Waste management	The reduction of waste by streamlining processes, the use of waste as inputs for own processes, and the responsible disposal of waste	(Bae and Smardon, 2011; Čiarnienė et al., 2020; Feil et al., 2019; Husgafvel et al., 2015; Jiang et al., 2018; MSCI, 2015; Nikolaou et al., 2019; SAM, 2020; Singh et al., 2020; Tokos et al., 2012)
Water management	The efficient use of water in processes, water recycling, and finding alternative water sources	(Bae and Smardon, 2011; Feil et al., 2019; Jiang et al., 2018; Nikolaou et al., 2019;

Table 3 (continued)

Variables	Definition	References
		SAM, 2020; Singh et al., 2020; Tokos et al., 2012)

evaluated this behavior with a dummy variable (e.g. Zhang et al., 2020), or have only considered the environmental aspect (e.g. Pellegrini et al., 2018).

Other studies focus on the background of sustainable employee behaviors from different frameworks, such as the Human Critical Success Factors (Ahuja et al., 2019) or the Theory of Planned Behavior (Weselink et al., 2017). A special insight comes from the learning organization and their relationship with corporate social responsibility. For example, recent studies recognize the value of continuous learning from employees and its impact on this sustainable development (Osagie et al., 2020). Also, the learning organization facilitates employees to discover what sustainable behaviors are and what are not, and thus helping the organization to achieve corporate social responsibility (Jamali, 2006). The studies related to Organizational Citizenship Behaviors are particularly interesting as they encompassed behaviors such as work performance, relations between employees or behaviors that reduce the impact on the environment (Boiral and Paillé, 2012; Podsakoff et al., 2009). While the three may cover all three aspects of sustainability, they refer to the three aspects in a general manner and do not determine the specific variable that impacts on. Moreover, most of these studies commonly refer exclusively to the environmental aspect (e.g. Temminck et al., 2015; Tosti-Kharas et al., 2017) of sustainability.

This review of the Corporate Sustainability variables and the role of employees leads us to consider the first research question complete. Thus, we have to answer the other two. The second one is to question on what variables can employees have an impact (RQ2). Also, how could employees have an impact on these variables? (RQ3). In the following sections, we will try to answer these questions by explaining the methodology followed by the authors.

3. Methodology

The objective of this article is, therefore, to assess the relevance of the variables and to select the ones on which employees can make a direct impact. As mentioned above, there are many variables and indicators proposed by previous studies. This range implies that expert knowledge of Corporate Sustainability and its practical application is necessary to discuss the role of employees in its development. This need for experts justifies the choice of the Delphi technique (Okoli and Pawlowski, 2004).

The Delphi method seeks the most agreed on answer to a complex question through the iteration of questions to experts (Prieto-Sandoval et al., 2018). This method has been noted as one of the most effective in preventing bias (Mukherjee et al., 2018) as the consideration of divergent opinions of people from different backgrounds will enrich the study (Schmidt et al., 2001). Previous authors have used the Delphi study to develop a theoretical framework (Okoli and Pawlowski, 2004) as well as to define the relevance of different variables and understand them in depth (Prieto-Sandoval et al., 2018).

This method is based on the anonymity of the respondents and controlled feedback (Schmidt, 1997). Anonymity implies that the experts do not know at any time who the other persons contacted for the survey are and are therefore expected to respond with sincerity (Mukherjee et al., 2018). Controlled feedback implies the existence of a facilitator who receives all the answers, puts them together and is able to reach a consensus (Mukherjee et al., 2018). Depending on the consensus of these responses, the facilitator will agree on whether further rounds are needed. The facilitator will also inform each participant of the overall results (Prieto-Sandoval et al., 2018). This space of time between

rounds is what gives depth to the analysis, since it allows the experts to reflect on their previous answers in order to correct them – if so desired (Okoli and Pawlowski, 2004).

3.1. Participant selection

As this method is based on sharing the knowledge and experience of the panelists, they should come from different backgrounds (Prieto-Sandoval et al., 2018). In this research, we selected three expert backgrounds: academics who have spent at least three years researching Corporate Sustainability, consultants who are experts in Corporate Sustainability implementation, and sustainability managers in different organizations. This selection was made with the idea that the in-depth knowledge of organizational sustainability theory would be supported by implementation, and that, in turn, continued practice would not confine the experts to their specialty (Mukherjee et al., 2018).

For this study, 27 people of four different nationalities were contacted. Eighteen of them agreed to participate. However, seven of these people did not answer all the rounds of questions. Therefore, the final sample of this study corresponds to 11 experts. The depth of the analysis performed with the Delphi technique makes it unnecessary to have a large sample of panelists, as 10 experts are sufficient (Okoli and Pawlowski, 2004). Therefore, the final number of responses is adequate for a Delphi study.

Regarding the scope of work, three (27.27%) were consultants, two (18.18%) were academics and the remaining six (54.54%) were from companies in different sectors. One consultant focused on circular economy and the other two in Corporate Sustainability with a holistic view. One academic focused her research on the Corporate Sustainability of SMEs, and the other focused on the water cycle. The organizations and responsibilities of the others were: CEO in a waste disposal company, technician in the sustainability department of an agri-food company, sustainability chief in an automotive manufacturing plant, ecodesign expert in a chemistry plant, environmental technician in a household appliance manufacturing and CEO of a circular-oriented battery plant.

3.2. Delphi structure

When the panelists confirmed their participation in the study, they received a message informing them of the gap we were trying to fill and providing them a link to the online survey with instructions. Anonymity was maintained throughout this process.

The questionnaires we sent to the experts had three parts with two subsections each. The parts referred to the three aspects of the Triple Bottom Line. Thus, we were able to focus the experts' attention on one aspect at a time.

The sub-sections referred to the two main questions that we tried to answer with this study. The first subsection answers the question of the relevance of the different sustainability variables. For this part the experts were sent a list of the variables (Tables 1–3), together with a 5-point Likert scale from 1 (not important) to 5 (totally important).

Then, to make sure that the selection of variables collected from the literature included the most important ones, we asked if they considered that any variable was missing. If so, we asked them to indicate which. To consider the variable for the next round of the Delphi, at least two experts had to propose the same variable. The panelists were also asked if they would remove any of the variables, with the same condition applying.

The second sub-section dealt with the role of employees in Corporate Sustainability. From the same list of variables, we asked to the panelists whether employees could impact each one and how. In the questionnaire we specified that we were looking for how any employee could impact the variables, regardless of their role in the company or the company's sector.

The first questionnaire consisted of all the previous questions,

presenting the complete list of variables in an online survey platform. In the second round, we sent a personalized document containing a report with the global answers of all the experts compared to theirs and we asked the experts to reconsider their answers in the search for consensus (Mukherjee et al., 2018). In this phase, we do not perform any analysis of average, because what interests the Delphi is the consensus. Therefore, we observed the standard deviation in the questions involving a likert scale. In the Yes/No questions, we simply observed the percentage of adherence to yes.

In this second round, a high consensus was reached on most questions according to the range and the standard deviation in the numerical questions (Holey et al., 2007). Those with less consensus were observed to be by experts who had not changed their answer, so another round was not considered necessary.

We aim to answer the three research questions through the analysis of the data collected. Concretely, in the next section we will assess the relative importance of variables with the primary goal of presenting an adequate set of variables for the employee impact analysis. Then, we will assess the responses of the experts regarding the employee impact on each variable.

4. Results & discussion of the Delphi study

In this section we will observe the results obtained from the last round of the Delphi. As a result of this analysis, the discussion presents the relevance assigned by the experts to the variables of each part of Corporate Sustainability, as well as the different agreements reached on which variables can be impacted by the employees.

4.1. Corporate Economic Sustainability

4.1.1. Assessment of variable relevance

At the beginning of the surveys, we gave the experts the list of variables along with an explanation taken from the literature. In the case of the economic variables, no new variables were added, and no variables were removed, so the variables selected from the literature were the final ones. Thus, the variables in Table 4 seem to be representative of the Corporate Economic Sustainability.

We asked the experts to evaluate the relevance of each variable one by one. Table 4 shows the results after two rounds of consultations. It shows the average of the relevance, the standard deviation and the range of responses. A lower standard deviation indicates higher consensus (Holey et al., 2007).

There is relative consensus on the relevance given by experts to variables judged by standard deviation and range, as there is no big differences in those values between variables. In addition, the variables of greater relevance – Economic Performance (4.82) and Innovation (4.64) – are also those that elicit higher consensus (with standard deviations of 0.39 and 0.48 respectively). The variable that seems to be less relevant to the Corporate Economic Sustainability is the reduction of

Table 4
Results of the Delphi study for the Corporate Economic Sustainability variables.

Variable	Average Relevance	Standard Deviation	Min	Max
Economic performance	4.82	0.39	4	5
Innovation	4.64	0.48	4	5
Codes of conduct/Corruption	4.45	0.50	4	5
Risk and crisis management	4.36	0.64	3	5
Corporate Governance	4.18	0.72	3	5
Employee wage	4.18	0.57	3	5
Technology Generation	4.09	0.79	3	5
Reduction of input costs	4.09	0.79	3	5
Reduction of waste management costs	3.64	0.77	3	5
Overall average	4.26	0.62		

waste management costs (average relevance of 3.64).

4.1.2. The role of employees in Corporate Economic Sustainability

We then asked the experts to assess with a Yes/No answer the possibility that any employee would have an impact on the measures of that variable. The final results show different levels of consensus as shown in Table 5. Also, we asked the experts how employees could have this impact, and the reasons they gave are included in the discussion.

There are two variables with full agreement: Economic Performance and Innovation. These two variables are also the two with the highest relevance given by the experts. Previous studies like Čiarnienė et al. (2020) incised in the wealth creation of employees, and Jiang et al. (2018) addressed the all-personnel labor productivity, as also Feil et al. (2019) point out. Innovation and performance at work are variables that are in line with research on High-Involvement Work Systems (Boxall and Winterton, 2018) and the framework of Continuous Improvement (e.g. Ruiz-Perez et al., 2020). These frameworks seek employee participation to improve the economic performance of the company.

With less consensus, but also susceptible to impact by employees are Codes of Conduct/Corruption and Technology Generation. The most common justification for Codes of Conduct was that each employee is responsible for implementing these codes, as well as providing feedback on their adequacy. The experts also believed that employees generated technology through ideas or suggestions in a similar way as with the innovation variable.

Finally, there was less consensus on the other variables, both in favor and against employee impact. It is noteworthy that no variable was considered by all experts as not susceptible to impact. This points in the same direction as studies that consider the role of employees as key to the whole economic development of the company (Mas-Machuca and Marimon, 2019; Valeau et al., 2019), although in this study it seems that employee job performance and the suggestion for innovations are crucial.

4.2. Corporate Social Sustainability

Literature often divides the social aspect of sustainability by stakeholders (Haanstra, 2016). Therefore, we began this part by presenting the experts with the stakeholders and the variables contained in each of them. An explanation was added for each variable extracted from the literature.

4.2.1. Assessment of variable relevance

As a first observation, the experts did not propose new variables for the different stakeholders, nor did they remove any variable. These two decisions indicate that the final sample of variables in the literature covers enough of Corporate Social Sustainability to be representative. Social variables importance and consensus are shown on Table 6.

Stakeholder relevance averages are higher than the relevance given to Corporate Economic Sustainability, with the exception of Local

Table 5
Variables of the Corporate Economic Sustainability that can be impacted through employee behaviors and expert consensus.

Variable	Any employee can influence this variable (% of experts that agreed)
Economic performance	100.0%
Innovation	100.0%
Codes of conduct/Corruption	90.91%
Technology Generation	90.91%
Employee wage	72.73%
Reduction of input costs	63.64%
Reduction of waste management costs	63.64%
Risk and crisis management	63.64%
Corporate Governance	36.36%

Community (3.58). The most important stakeholder groups are, in their opinion, Value Chain (4.50) and Employees (4.40).

The variables that the experts have perceived as the most important, exceeding 4.5 points, have been Fair Wage, Equal Opportunities, Occupational Health and Safety and Human Capital Development by the stakeholder employees; Client Health and Safety; Fair Relations with Suppliers in the stakeholder Value Chain, and Legal Compliance in the stakeholder Society. These variables also achieved higher consensus as seen in the standard deviation and the range.

On the other hand, it should be noted that practically one variable of each stakeholder has pointedly lower results than its peers. This is the case of free association of employees, support of local community projects, customer privacy and social innovation.

4.2.2. The role of employees in the Corporate Social Sustainability

Then, we asked the experts variable by variable if they believed that any employee of the company had an impact on the outcome of this variable. The consensus responses are shown in Table 7. A high consensus was reached on social sustainability. Only one variable out of the 17 presented was not agreed upon –Working Hours of the employees. All the variables and stakeholders absent in Table 7 achieved full expert consensus that employees could not influence on the variables.

It is observed that no variable of the stakeholders Local Community, Clients, Value Chain and Society can be directly impacted by the behaviors of any employee. As justified by the experts, in most of these variables the impact was produced by a group of employees or by management decisions. For example, the decision to have fair relationships with suppliers depends on the employees in charge of purchasing, but not just any employee can have impact on it. In addition, although they may complain or make proposals, it is not up to their behavior to implement actions that will improve the success of the variable.

Employees have a clear impact on the working relationships between them – establishing and maintaining them as an important part of job satisfaction (Hutchins et al., 2019). This is the reason behind the organizational citizenship behavior toward other individual that poses that these bonding between coworkers is valuable for the company (Podsakoff et al., 2009).

All employees can attend and take advantage of the training included in Human Capital Development. The experts indicate that trained staff can make the appropriate decisions in sustainability. This explicit mention of training can be found in the literature both in the importance of awareness (Temminck et al., 2015) and directly in eco-training (Pellegrini et al., 2018). In these cited studies, it is presented as a background for sustainable employee behavior. The attendance to training is in itself a sustainable development, but other studies have also demonstrated that continuous learning enhances CSR implementation (Osagie et al., 2020).

Finally, the panelists pointed out that the employees are the ones who must comply with the occupational health and safety measures presented by the company. This was also postulated by Čiarnienė et al. (2020) recently in a study of sustainable behaviors of Lithuanian workers, and is relatively common in Corporate Social Sustainability (e.g. Feil et al., 2019; Husgafvel et al., 2015).

The three selected variables (Employee Relations, Human Capital Development and Occupational Health and Safety) are consistent with a recent review which shows that, in social sustainability, employees can cooperate, have equal opportunities, participate in company activities, achieve health and safety and promote external partnership (Stanis kienė and Stankevi č i ū t ě , 2018). In both this study and ours, employees do not interact with other stakeholders. Our three variables are present in this review, narrowing the field to what is possible for all employees in different companies.

Table 6
Results of the Delphi study for the Corporate Social Sustainability variables.

Stakeholder	Variable	Average Relevance	Standard Deviation	Min	Max
Employees	Fair Wage	4.91	0.30	4	5
	Equal Opportunities	4.82	0.40	4	5
	Occupational Health and Safety	4.64	0.67	3	5
	Human Capital Development	4.55	0.52	4	5
	Working Hours	4.36	0.81	3	5
	Employee Relations	4.18	0.60	3	5
	Free Association	3.36	0.67	2	4
	Overall Employees	4.40	0.57	2	5
Local Community	Local Employment	4.09	0.83	3	5
	Access to Material Resources	4.09	0.83	3	5
	Local Community Projects	2.55	0.69	1	3
	Overall Local Community	3.58	0.78	1	5
Clients	Health and Safety	4.73	0.47	4	5
	Privacy	3.82	0.98	2	5
	Overall Clients	4.27	0.72	2	5
Value Chain	Fair Relations with Suppliers	4.64	0.92	2	5
	Intellectual Property Rights	4.36	0.67	3	5
	Overall Value Chain	4.50	0.80	2	5
Society	Legal Compliance	4.82	0.40	4	5
	Communicated Environmental Risk	4.45	0.69	3	5
	Social Innovations	3.73	0.90	2	5
	Overall Society	4.33	0.67	2	5
Overall average		4.24	0.67		

Table 7
Variables of the Corporate Social Sustainability that can be impacted through employee behaviors and expert consensus.

Stakeholder	Variable	Any employee can influence this variable (% of experts that agreed)
Employees	Employee Relations	100.0%
	Human Capital Development	90.91%
	Occupational Health and Safety	81.82%
	Working Hours	45.45%

4.3. Corporate Environmental Sustainability

4.3.1. Assessment of variable relevance

The experts were shown the variables and an explanation extracted from the literature. Then they were asked one by one to what extent they considered it important. In the second round, they were presented with the opportunity to change their answer by looking at the average of the other experts. The results are shown in [Table 8](#).

Before proceeding with the analysis of results, the authors want to emphasize that no new variables were added, and no variables were removed. This being the agreed-upon sample of variables suggests that it compresses the Corporate Environmental Sustainability.

The first result is that the overall average of the Corporate Environmental Sustainability variables is the highest of the three. It is even higher than the average of the stakeholder Value Chain, which was the highest in Corporate Social Sustainability. Rather than indicating that Environmental Sustainability is more important than the other two, this result seems to indicate the absence of *less significant* variables in the Corporate Environmental Sustainability according to the experts' opinion. In other words, it seems that the right variables have been extracted from the literature for this section so that all variables have relevance. A greater consensus was generated among experts on the relevance of these variables. This consensus is seen in the reduction of the range and standard deviation in most variables. The variable that generated the least consensus was Biodiversity.

Table 8
Results of the Delphi study for the Corporate Environmental Sustainability variables.

Variable	Average Relevance	Standard Deviation	Min	Max
Compliance with Current Laws	4.91	0.29	4	5
Toxic Waste Management	4.91	0.29	4	5
Emissions and Effluents	4.82	0.39	4	5
Energy	4.82	0.39	4	5
Environmental Impact of Products	4.82	0.39	4	5
Potential Contribution to Global Warming	4.64	0.48	4	5
Materials	4.64	0.64	3	5
Transport	4.64	0.48	4	5
Waste	4.64	0.64	3	5
Biodiversity	4.55	0.99	2	5
Operations in Environmentally Sensitive Locations	4.55	0.66	3	5
Water	4.55	0.66	3	5
Environmental Management System	4.45	0.66	3	5
Overall average	4.69	0.53		

According to the experts, to obtain Corporate Environmental Sustainability a company must give priority to compliance with legislation, toxic waste management, emissions, energy consumed and the potential environmental impact of products.

4.3.2. The role of employees in Corporate Environmental Sustainability

The experts also reached a greater consensus when deciding on which variables employees could influence. As can be seen in [Table 9](#), energy, waste and water achieved full agreement on the ability of employees to impact; environmental impact of products, transport and materials elicited very little dissent; and experts agreed that employees could not impact in the rest of variables.

One of the advantages of this consensus is that there are no variables in the middle ground. There are six variables where employees can

Table 9

Variables of the Corporate Environmental Sustainability that can be impacted through employee behaviors and expert consensus.

Variable	Any employee can influence this variable (% of experts that agreed)
Energy	100%
Waste	100%
Water	100%
Environmental Impact of Products	90.91%
Transport	90.91%
Materials	81.82%

clearly have an impact and seven where they clearly will not. The results are present in Table 9. In this table, the absent variables are those that none of the experts thought that it could be direct impact of any employee.

Regarding the justifications of why employees can have an impact on these six variables, we can classify them into three groups according to the behavior requested from the employees.

The first behavior that experts point out is that of personal decision on how to manage some of the company's resources. The experts agreed that, although it is not crucial, it is important for employees to monitor the expenditure of water, materials and energy, and reduce the waste generated.

The second group consists of the involvement of each employee in reducing the environmental impact of products and services. This impact, according to experts, can be achieved through suggestions and process improvement. As the panelists have indicated, it is related to the resource variables, not on an individual level but on a process level.

The third and last group has to do with a daily decision of the workers: how they go to work. All employees can choose the mode of transport to work, and the experts have pointed this out.

These variables are not new in the literature on sustainable behavior. For example, a study was conducted a decade ago in which several students were asked about their choice of transportation, energy efficiency, and water use (Ferguson et al., 2011).

In the occupational field, authors such as Young et al. (2015) included the individual responsibility of employees in recycling, waste management and reducing energy expenditure. At the beginning of the century, the importance of employees in waste reduction had already been studied (Chen et al., 2002; Tam and Tam, 2008).

Although the environmental is the area of the Triple Bottom Line on which most variables can impact, the two most important variables, Compliance with Current Law and Toxic Waste Management, are left out of this employee impact. The first because it is the company's responsibility (Husgafvel et al., 2015) and the latter because not all employees participate in this protocol according to the experts.

Finally, we should point out that these results are in line with the work of Blok et al. (2015), who sought to develop a questionnaire for sustainable work behaviors. They obtained the pro-environmental behavior that, among other variables, contained attention to heating, printing, energy optimization of computers and lights, and recycling. The answers to this Delphi method are similar to the ones postulated by this study, although it also includes the choice of the means of transport and the presentation of suggestions to improve processes, products and/or services.

In short, the environmental perspective of Corporate Sustainability has received the most attention from researchers in previous studies. This study has collected all these contributions, and experts in sustainability have confirmed that the Environmental Sustainable Behaviors of employees can be summarized in three points: efficiency of different resources, environmental consideration of transport and suggestions for reducing the environmental impact of processes, products and services.

5. Conclusions

This study investigates the variables of Corporate Sustainability. Concretely, it proposes three research questions. To what extent could we establish a complete list of variables with the relevance of each for Corporate Sustainability? (RQ1). On what variables can employees have an impact? (RQ2). How could employees have an impact on these variables? (RQ3). Other researchers have contributed significantly, but there is low consensus on the variables and little literature on the role of employees in the development of each variable. Thus, we consulted eleven experts in a Delphi technique (Meuer et al., 2020; Mukherjee et al., 2018) to answer the three research questions of this study (Section 2).

Answering the first question, the experts reached high levels of consensus and relevance for most of the variables selected from the literature. This study presents a set of variables that exceeds the 30 variables that are the average when studying the Triple Bottom Line (Feil et al., 2019), especially in social sustainability. However, the experts also agreed that there was no need to withdraw or add any proposed variable, which indicates that, despite being a higher number, it is appropriate. An analysis of the relevance of each variable stated by the experts shows that all parts of sustainability have a relevance above 4 points on a 5-point Likert scale, having reached a greater consensus on environmental sustainability. Similarly, with a few exceptions, most variables have high relevance, indicating that the final set of variables is representative for the main variables of Corporate Sustainability.

From the experts' answers to the second and third questions, there are different degrees of consensus. We could classify the variables susceptible to impact according to the types of behaviors pointed out by the experts.

In the first place, we find the variables that are impacted through the correct functioning of the job. Direct Economic Performance can be impacted with the job performance of each employee. Codes of Conduct (from the economic area), and Occupational Health and Safety (from the social area), with the fulfillment of the rules of the job. And Human Capital Development, with the attendance to the courses programmed by the company.

Secondly, we have variables that are impacted through extra-role behaviors closely associated with the concept of Organizational Citizenship Behaviors (Podsakoff et al., 2009; Temminck et al., 2015). To this group belong Innovation and Technology Generation in the economic aspect; Employee Relations in the social aspect; and the presentation of suggestions to reduce the Environmental Impact of products, services and/or processes in the environmental aspect.

Thirdly, we can classify an efficiency behavior in different variables of environmental sustainability. This would be the reduction of energy, water, materials, and waste. Finally, also in the environmental aspect, the personal initiative in the choice of transport to the workplace.

This selection of employee-related variables is a theoretical advance, since it establishes in a methodical way a relationship between the variables studied for years and the behaviors of employees.

It is fair to declare that these relationships consider only a direct effect on a single variable. Some variable improvements could have detrimental effects in other variables. For example, when employees are focused on the recycling of the materials and energy efficiency, we could expect a loose of the job performance until these behaviors are consolidated. But the aim of this study is not to present an overall and optimized sustainable behaviors but to connect the employee behaviors to the sustainability variables present in literature.

The results of this article also have practical implications for companies and consultants, as this article presents a list of variables that can be used to establish sustainability metrics in the Triple Bottom Line. Moreover, in our opinion, it is more interesting for practitioners to know what employee behaviors make an impact on which variables on the Corporate Sustainability.

This knowledge will allow policies to raise employee awareness and

facilitate these behaviors. It stands as a future research stream to prove that these behaviors are capable of enhancing the overall Corporate Sustainability, or that they only increase their related variable. Also, research should delve on the best way of organizations to boost the employee sustainable behaviors. Thus, it is necessary to develop in-field validated measurement instruments to the identified employee behaviors to the studies that will prove that an increase in these sustainable behaviors leads to an improvement in sustainability.

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CRedit authorship contribution statement

Fernando Ruiz-Pérez: Conceptualization, Methodology, Investigation, Formal analysis, Writing – original draft. **Alvaro Lleo:** Conceptualization, Validation, Investigation, Supervision, Writing – review & editing. **Marta Ormazabal:** Conceptualization, Validation, Investigation, Supervision, Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

- Ahuja, J., Panda, T.K., Luthra, S., Kumar, A., Choudhary, S., Garza-Reyes, J.A., 2019. Do human critical success factors matter in adoption of sustainable manufacturing practices? An influential mapping analysis of multi-company perspective. *J. Clean. Prod.* <https://doi.org/10.1016/j.jclepro.2019.117981>.
- Azapagic, A., 2003. Systems approach to corporate sustainability. *Process Saf. Environ. Protect.* 81, 303–316. <https://doi.org/10.1205/095758203770224342>.
- Bae, H., Smardon, R.S., 2011. Indicators of sustainable business practices. In: Broniewicz, E. (Ed.), *Environmental Management in Practice*. IntechOpen. <https://doi.org/10.5772/17254>.
- Bansal, P., 2005. Evolving sustainably: a longitudinal study of corporate sustainable development. *Strat. Manag. J.* 26, 197–218. <https://doi.org/10.1002/smj.441>.
- Blok, V., Wesselink, R., Studynka, O., Kemp, R., 2015. Encouraging sustainability in the workplace: a survey on the pro-environmental behaviour of university employees. *J. Clean. Prod.* 106, 55–67. <https://doi.org/10.1016/j.jclepro.2014.07.063>.
- Boiral, O., Paillé, P., 2012. Organizational citizenship behaviour for the environment: measurement and validation. *J. Bus. Ethics* 109, 431–445. <https://doi.org/10.1007/s10551-011-1138-9>.
- Boxall, P., Winterton, J., 2018. Which conditions foster high-involvement work processes? A synthesis of the literature and agenda for research. *Econ. Ind. Democr.* 39, 27–47. <https://doi.org/10.1177/0143831X1559584>.
- Chen, Z., Li, H., Wong, C.T.C., 2002. An application of bar-code system for reducing construction wastes. *Autom. Construct.* 11, 521–533. [https://doi.org/10.1016/S0926-5805\(01\)00063-2](https://doi.org/10.1016/S0926-5805(01)00063-2).
- Čiarnienė, R., Vienožindienė, M., Adamonienė, R., 2020. Sustainable behaviour: evidence from Lithuania. *Eng. Manag. Prod. Serv.* 12, 80–92. <https://doi.org/10.2478/emj-2020-0007>.
- Dočekalová, M.P., Kocmanová, A., 2016. Composite indicator for measuring corporate sustainability. *Ecol. Indic.* 61, 612–623. <https://doi.org/10.1016/j.ecolind.2015.10.012>.
- Elkington, J., 1997. *Cannibals with Forks: Triple Bottom Line of 21st Century Business*. New Society Publishers, Capstone.
- Engert, S., Rauter, R., Baumgartner, R.J., 2016. Exploring the integration of corporate sustainability into strategic management: a literature review. *J. Clean. Prod.* 112, 2833–2850. <https://doi.org/10.1016/j.jclepro.2015.08.031>.
- Feil, A.A., Schreiber, D., Haetinger, C., Strasburg, V.J., Barkert, C.L., 2019. Sustainability indicators for industrial organizations: systematic review of literature. *Sustain. Times* 11, 1–15. <https://doi.org/10.3390/su11030854>.
- Ferguson, M.A., Branscombe, N.R., Reynolds, K.J., 2011. The effect of intergroup comparison on willingness to perform sustainable behavior. *J. Environ. Psychol.* 31, 275–281. <https://doi.org/10.1016/j.jenvp.2011.04.001>.
- Franco-García, M.-L., Haanstra, W., Toxopeus, M., Schuur, B., 2018. Social and environmental life cycle assessment (SELCA) method for sustainability analysis: the jeans global value Chain as a showcase. In: *Towards Zero Waste: Circular Economy Boost, Waste to Resources*, pp. 215–237. https://doi.org/10.1007/978-3-319-92931-6_11.
- Geissdoerfer, M., Savaget, P., Bocken, N.M.P., Hultink, E.J., 2017. The Circular Economy – a new sustainability paradigm? *J. Clean. Prod.* 143, 757–768. <https://doi.org/10.1016/j.jclepro.2016.12.048>.
- Haanstra, W., 2016. *SELCA Handbook: A Method and Guide for Combined Social & Environmental Life Cycle Assessment*. University of Twente.
- Henderson, R., 2020. *Reimagining Capitalism in a World on Fire* (Hachette UK).
- Holey, E.A., Feeley, J.L., Dixon, J., Whittaker, V.J., 2007. An exploration of the use of simple statistics to measure consensus and stability in Delphi studies. *BMC Med. Res. Methodol.* 7 (52) <https://doi.org/10.1186/1471-2288-7-52>.
- Husgafvel, R., Pajunen, N., Virtanen, K., Paavola, I.L., Päällysaho, M., Inkinen, V., Heiskanen, K., Dahl, O., Ekroos, A., 2015. Social sustainability performance indicators – experiences from process industry. *Int. J. Sustain. Eng.* 8, 14–25. <https://doi.org/10.1080/19397038.2014.898711>.
- Hutchins, M.J., Richter, J.S., Henry, M.L., Sutherland, J.W., 2019. Development of indicators for the social dimension of sustainability in a U.S. business context. *J. Clean. Prod.* 212, 687–697. <https://doi.org/10.1016/j.jclepro.2018.11.199>.
- Jamali, D., 2006. Insights into triple bottom line integration from a learning organization perspective. *Bus. Process Manag. J.* 12, 809–821. <https://doi.org/10.1108/14637150610710945>.
- Jiang, Q., Liu, Z., Liu, W., Li, T., Cong, W., Zhang, H., Shi, J., 2018. A principal component analysis based three-dimensional sustainability assessment model to evaluate corporate sustainable performance. *J. Clean. Prod.* 187, 625–637. <https://doi.org/10.1016/j.jclepro.2018.03.255>.
- Kolk, A., Hong, P., Dolen, W. Van, 2008. Corporate social responsibility in China: an analysis of domestic and foreign retailers' sustainability dimensions. *Bus. Strat. Environ.* 19, 289–303.
- López, M.V., García, A., Rodríguez, L., 2007. Sustainable development and corporate performance: a study based on the Dow Jones sustainability index. *J. Bus. Ethics* 75, 285–300. <https://doi.org/10.1007/s10551-006-9253-8>.
- Mas-Machuca, M., Marimon, F., 2019. From sense-making to perceived organizational performance: looking for the best way. *J. Manag. Dev.* 38, 105–117. <https://doi.org/10.1108/JMD-05-2018-0155>.
- Meuer, J., Koelbel, J., Hoffmann, V.H., 2020. On the nature of corporate sustainability. *Organ. Environ.* 33, 319–341. <https://doi.org/10.1177/1086026619850180>.
- MSCI, 2015. Msci Esg Kld Stats : 1991-2014, MSC ESG KLD Stats: 1991-2014 Data Sets. Last accessed 18/12/2020 in. <https://www.wiso.uni-hamburg.de/bibliothek/recherche/datenbanken/unternehmensdaten/msci-methodology-2014.pdf>.
- Mukherjee, N., Zabala, A., Hüge, J., Nyumba, T.O., Adem Esmail, B., Sutherland, W.J., 2018. Comparison of techniques for eliciting views and judgements in decision-making. *Qual. Methods. Eliciting. Judgement. Decis. Making* 54–63. <https://doi.org/10.1111/2041-210X.12940>, 2018.
- Nikolaou, I.E., Tsalis, T.A., Evangelinos, K.I., 2019. A framework to measure corporate sustainability performance: a strong sustainability-based view of firm. *Sustain. Prod. Consum.* 18, 1–18. <https://doi.org/10.1016/j.spc.2018.10.004>.
- Okoli, C., Pawlowski, S.D., 2004. The Delphi method as a research tool: an example, design considerations and applications. *Inf. Manag.* 42, 15–29. <https://doi.org/10.1016/j.im.2003.11.002>.
- Osagie, E., Wesselink, R., Blok, V., Mulder, M., 2020. Learning organization for corporate social responsibility implementation: unravelling the intricate relationship between organizational and operational learning organization characteristics. *Organ. Environ.* 1–24. <https://doi.org/10.1177/1086026620933915> (in press).
- Pellegrini, C., Rizzi, F., Frey, M., 2018. The role of sustainable human resource practices in influencing employee behavior for corporate sustainability. *Bus. Strat. Environ.* 27, 1221–1232. <https://doi.org/10.1002/bse.2064>.
- Podsakoff, N.P., Whiting, S.W., Podsakoff, P.M., Blume, B.D., 2009. Individual- and organizational-level consequences of organizational citizenship behaviors: a meta-analysis. *J. Appl. Psychol.* <https://doi.org/10.1037/a0013079>.
- Prieto-Sandoval, V., Ormazabal, M., Jaca, C., Viles, E., 2018. Key elements in assessing circular economy implementation in small and medium-sized enterprises. *Bus. Strat. Environ.* 27, 1525–1534. <https://doi.org/10.1002/bse.2210>.
- Ruiz-Perez, F., Lleo, A., Viles, E., Jurburg, D., 2020. Enhancing participation through organizational drivers. *Total Qual. Manag. J.* <https://doi.org/10.1108/TQM-01-2020-0012>.
- SAM, 2020. *CSA Companion 2020*. Last accessed 18/12/2020 in. https://portal.csa.spiglobal.com/survey/documents/SAM_CSA_Companion.pdf.
- Schmidt, R., Lyytinen, K., Keil, M., Cule, P., 2001. Identifying software project risks: an international Delphi study. *J. Manag. Inf. Syst.* 17, 5–36. <https://doi.org/10.1080/07421222.2001.11045662>.
- Schmidt, R.C., 1997. Managing Delphi surveys using nonparametric statistical techniques. *Decis. Sci. J.* 28, 763–774. <https://doi.org/10.1111/j.1540-5915.1997.tb01330.x>.
- Shi, L., Wu, K.J., Tseng, M.L., 2017. Improving corporate sustainable development by using an interdependent closed-loop hierarchical structure. *Resour. Conserv. Recycl.* 119, 24–35. <https://doi.org/10.1016/j.resconrec.2016.08.014>.
- Singh, C., Singh, D., Khamba, J.S., 2020. Understanding the key performance parameters of green lean performance in manufacturing industries. *Mater. Today. Proc.* <https://doi.org/10.1016/j.matpr.2020.06.328> (in press).
- Staniškienė, E., Stankevičiūtė, Ž., 2018. Social sustainability measurement framework: the case of employee perspective in a CSR-committed organisation. *J. Clean. Prod.* 188, 708–719. <https://doi.org/10.1016/j.jclepro.2018.03.269>.
- Tam, V.W.Y., Tam, C.M., 2008. Waste reduction through incentives: a case study. *Build. Res. Inf.* 36, 37–43. <https://doi.org/10.1080/09613210701417003>.
- Temminck, E., Mearns, K., Fruhen, L., 2015. Motivating employees towards sustainable behaviour. *Bus. Strat. Environ.* 24, 402–412. <https://doi.org/10.1002/bse.1827>.

- Tokos, H., Pintarić, Z.N., Krajnc, D., 2012. An integrated sustainability performance assessment and benchmarking of breweries. *Clean Technol. Environ. Policy* 14, 173–193. <https://doi.org/10.1007/s10098-011-0390-0>.
- Tosti-Kharas, J., Lamm, E., Thomas, T.E., 2017. Organization OR environment? Disentangling employees' rationales behind organizational citizenship behavior for the environment. *Organ. Environ.* 30, 187–210. <https://doi.org/10.1177/1086026616668381>.
- Tseng, M.L., 2017. Using social media and qualitative and quantitative information scales to benchmark corporate sustainability. *J. Clean. Prod.* 142, 727–738. <https://doi.org/10.1016/j.jclepro.2016.05.062>.
- Valeau, P., Eynaud, P., Chatelain-Ponroy, S., Sponem, S., 2019. Toward a reassessment of the role of rank-and-file stakeholders in nonprofit organizations. *Nonprofit Voluntary Sect. Q.* 48, 146–172. <https://doi.org/10.1177/0899764018794898>.
- Wesselink, R., Blok, V., Ringersma, J., 2017. Pro-environmental behaviour in the workplace and the role of managers and organisation. *J. Clean. Prod.* 168, 1679–1687. <https://doi.org/10.1016/j.jclepro.2017.08.214>.
- Young, W., Davis, M., McNeill, I.M., Malhotra, B., Russell, S., Unsworth, K., Clegg, C.W., 2015. Changing behaviour: successful environmental programmes in the workplace. *Bus. Strat. Environ.* 24, 689–703. <https://doi.org/10.1002/bse.1836>.
- Zhang, L., Wu, J., Chen, H., Nguyen, B., 2020. Does one bad apple ruin a firm's green brand image? Examining frontline service employees' environmentally irresponsible behaviors. *Eur. J. Market.* 54, 2501–2521. <https://doi.org/10.1108/EJM-11-2019-0844>.